

SHOP INFORMATION ADVERTISEMENT PANEL SYSTEM AND SHOP
INFORMATION ADVERTISEMENT METHOD

BACKGROUNDS OF THE INVENTION

FIELD OF THE INVENTION

The present invention relates to a shop
information advertisement panel system for advertising a
shop, and more particularly to a shop information
advertisement panel system capable of easily updating an
advertisement image to be displayed.

DESCRIPTION OF THE RELATED ART

Heretofore, an advertisement panel system
provided with a display such as a CRT, LCD, or the like
is usually set at a shop and at busy streets in front of
a station or the like, so to display the advertisement
of the shop. The conventional advertisement panel system
is designed in that image information expressing an
advertisement image is stored in a memory installed
therein, hence to display the advertisement image
according to the content of the memory. Accordingly, in
the case of changing the advertisement image, an
advertiser has to go to the setting place of the
advertisement panel so as to rewrite the content of the
memory.

As mentioned above, in the case of changing an
advertisement image, the conventional technique imposes
a lot of burden on an advertiser because he or she must

go to the setting place of the advertisement panel system and rewrite the memory content thereof, and this also disturbs immediate update of the advertisement image.

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SUMMARY OF THE INVENTION

An object of the present invention is to provide a shop information advertisement panel system capable of updating an advertisement image quickly and lessening the burden of an advertiser.

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Another object of the present invention is to provide a shop information panel system capable of displaying the content of an update advertisement on an advertisement panel system without imposing so much load on a communication network.

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Further another object of the present invention is to provide a shop information advertisement panel system capable of presenting not only an advertisement image but also a detailed described map of a shop and detailed information such as reservation state to a user.

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Another object of the present invention is to provide a shop information advertisement panel system capable of effective advertisement taking the focus on consumers comparatively in the neighborhood of a shop.

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Another object of the present invention is to provide a shop information advertisement panel system in which an advertiser can obtain necessary information for

the future commercial activities.

Further another object of the present invention is to provide a shop information advertisement panel system in which a user can make a reservation at ease.

5 According to the first aspect of the invention, a shop information advertisement panel system having a plurality of shop terminals provided in a shop, an advertisement panel control terminal for controlling an advertisement panel, connected with the respective shop
10 terminals through a communication network, and a plurality of advertisement panel devices provided for every shop terminal for displaying an advertisement of the shop: wherein

 the respective shop terminals comprise
15 an advertisement information registration requesting unit for requesting the advertisement panel control terminal to register advertisement information including image information expressing an advertisement image to be displayed on the advertisement panel device
20 corresponding to its own shop terminal, through the communication network;

 the advertisement panel control terminal comprises

 an advertisement information controlling unit for
25 registering and controlling the advertisement information for every shop terminal, based on the registration request of the advertisement information

from the shop terminal, and sending the image information of the advertisement information to the advertisement panel device corresponding to the above shop terminal; and

5 the respective advertisement panel devices comprise

an advertisement display unit for displaying an advertisement according to the image information sent from the advertisement panel control terminal.

10 In the preferred construction, the shop terminal comprising

an advertisement information update requesting unit for requesting the advertisement panel control terminal to update the advertisement information corresponding to the shop terminal itself, which is registered in the advertisement panel control terminal, through the communication network; and

15 the advertisement panel control terminal comprising

20 an advertisement information registering unit of adding control information to the advertisement information requested to be registered by the shop terminal, so to register the both information therein, and

25 an advertisement information updating unit for updating the advertisement information corresponding to the shop terminal having made an update request, of the

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an advertisement information registration
requesting unit for requesting the advertisement panel
control terminal to register advertisement information
including image information expressing an advertisement
5 image to be displayed on the advertisement panel device
corresponding to its own shop terminal and detailed
information on the shop where this shop terminal is
provided, through the communication network;

the advertisement panel control terminal
10 comprising

an advertisement information controlling unit for
registering and controlling the advertisement
information for every shop terminal, based on the
registration request of the advertisement information
15 from the shop terminal, and sending the image
information to the advertisement panel device
corresponding to the shop terminal, and

a detailed information referring unit for, when
the advertisement panel device makes a reference request
20 of the detailed information, sending the detailed
information corresponding to the advertisement panel
device making the reference request of the detailed
information, of the registered advertisement information,
to the advertisement panel device making the reference
25 request; and

the respective advertisement panel devices
comprising

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an advertisement display unit for displaying an advertisement according to the image information sent from the advertisement panel control terminal, and

5 a sending/receiving unit for portable unit for, upon receipt of a reference request of the detailed information from an information portable unit, issuing the reference request of the detailed information to the advertisement panel control terminal and sending the detailed information sent from the advertisement panel control terminal to the information portable unit,

10 the information portable unit

including a detailed information requesting unit for sending the reference request of the detailed information to the advertisement panel device according to a user's instruction, and displaying the received detailed information.

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In the preferred construction, the shop terminal comprising

an advertisement information update requesting unit for requesting the advertisement panel control terminal to update the advertisement information corresponding to the shop terminal itself, which is registered in the advertisement panel control terminal, through the communication network; and

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25 the advertisement panel control terminal comprising

an advertisement information registering unit of

an advertisement information updating unit for updating the advertisement information corresponding to the shop terminal having made an update request, of the advertisement information registered in an advertisement information storing unit, according to the update request of the advertisement information from the shop terminal.

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5 sends an item list of the detailed information
corresponding to the advertisement panel device, of the
registered detailed information, to the advertisement
panel device having made a reference request when the
reference request of the detailed information was made
by the same advertisement panel device, and sends the
content of an item corresponding to an item name to the
advertisement panel device when the item name of the
item list was notified by the same advertisement panel
10 device, and

the sending/receiving unit for portable unit
issues a reference request of the detailed
information to the advertisement panel control terminal,
sends an item list to the information portable unit,
15 upon receipt of the item list of the detailed
information from the advertisement panel control
terminal, notifies an item name to the detailed
information referring unit, upon receipt of the item
name from the information portable unit, and sends the
20 content of an item sent from the detailed information
referring unit to the information portable unit.

In another preferred construction, the detailed
information requesting unit of the information portable
unit sends a reference request of the detailed
25 information to the advertisement panel device according
to a user's instruction, displays an item list upon
receipt of the item list of the detailed information,

sends an item name of an item specified by a user to the advertisement panel device, and receives and displays the content of the item sent from the advertisement panel device.

5 In another preferred construction, the advertisement panel control terminal comprises an access history storing unit for storing an access history indicating access state of each item of the registered detailed information, and

10 the detailed information referring unit updates the access history stored in the access history storing unit based on an item name notified from the advertisement panel device.

15 In another preferred construction, the detailed information includes reservation information indicating reservation state,

 the information portable unit comprises a reservation requesting unit for sending reservation requesting information to the advertisement panel device,

20 the sending/receiving unit for portable unit sends the reservation requesting information to the advertisement panel control terminal, upon receipt of the reservation requesting information,

 the advertisement panel control terminal
25 comprises a reservation request sending/receiving unit for sending the reservation requesting information sent from the sending/receiving unit for portable unit to the

shop terminal corresponding to the advertisement panel device, and

the shop terminal comprises a reservation controlling unit for controlling the reservation
5 information indicating the reservation state and updating the reservation information based on the received reservation requesting information.

According to the third aspect of the invention, a shop information advertisement method in a shop
10 information advertisement panel system having a plurality of shop terminals provided in a shop, an advertisement panel control terminal for controlling an advertisement panel, connected with the respective shop terminals through a communication network, and a
15 plurality of advertisement panel devices provided for every shop terminal for displaying an advertisement of the shop, comprising the following steps of:

in the respective shop terminals,
requesting the advertisement panel control
20 terminal to register advertisement information including image information expressing an advertisement image to be displayed on the advertisement panel device corresponding to its own shop terminal, through the communication network;

25 in the advertisement panel control terminal,
registering and controlling the advertisement information for every shop terminal, based on the

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control terminal.

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according to the update request of the advertisement information from the shop terminal.

In another preferred construction, the shop information advertisement method in a shop information advertisement panel system further comprising the following steps of:

in the shop terminal, sending the advertisement information including the image information and detailed information on the shop to the advertisement panel control terminal, so to request the same terminal to register the same information therein; and

in the advertisement panel control terminal adding the control information including the information of the advertisement panel device corresponding to the shop terminal to the advertisement information sent from the shop terminal, so to register the both information for every shop terminal into the advertisement information registering unit.

According to another aspect of the invention, a shop information advertisement method in a shop information advertisement panel system having a plurality of shop terminals provided in a shop, an advertisement panel control terminal for controlling an advertisement panel, connected with the respective shop terminals through a communication network, and a plurality of advertisement panel devices provided for every shop terminal for displaying an advertisement of

the shop, comprising the following steps of:

in the respective shop terminals,

requesting the advertisement panel control

terminal to register advertisement information including

5 image information expressing an advertisement image to

be displayed on the advertisement panel device

corresponding to its own shop terminal and detailed

information on the shop where this shop terminal is

provided, through the communication network;

10 in the advertisement panel control,

registering and controlling the advertisement

information for every shop terminal, based on the

registration request of the advertisement information

from the shop terminal, and sending the image

15 information to the advertisement panel device

corresponding to the shop terminal, and

when the advertisement panel device makes a

reference request of the detailed information, sending

the detailed information corresponding to the

20 advertisement panel device having made the reference

request to the detailed information, of the registered

advertisement information, to the advertisement panel

device having made the reference request; and

in the respective advertisement panel devices,

25 displaying an advertisement according to the

image information sent from the advertisement panel

control terminal, and

upon receipt of a reference request of the
detailed information from an information portable unit,
issuing the reference request of the detailed
information to the advertisement panel control terminal
5 and sending the detailed information sent from the
advertisement panel control terminal to the information
portable unit.

In the preferred construction, the shop
information advertisement method in a shop information
10 advertisement panel system comprising the following
steps of:

in the shop terminal,
requesting the advertisement panel control
terminal to update the advertisement information
15 corresponding to the shop terminal itself, which is
registered in the advertisement panel control terminal,
through the communication network; and

in the advertisement panel control terminal,
adding control information to the advertisement
20 information requested to be registered by the shop
terminal so to register the both information, and

updating the advertisement information
corresponding to the shop terminal having made an update
request, of the registered advertisement information,
25 according to the update request of the advertisement
information from the shop terminal.

In another preferred construction, the shop

information advertisement method in a shop information advertisement panel comprising the following steps of:

in the shop terminal, sending the advertisement information including the image information and detailed information on the shop to the advertisement panel control terminal, so to request the same terminal to register the same information; and

in the advertisement panel control terminal, adding the control information including the information of the advertisement panel device corresponding to the shop terminal, to the advertisement information sent from the shop terminal, so to register the both information for every shop terminal into the advertisement information registering unit.

In another preferred construction, the detailed information consists of a plurality of items,

the advertisement panel control terminal sends an item list of the detailed information corresponding to the advertisement panel device, of the registered detailed information, to the advertisement panel device having made a reference request when the reference request of the detailed information was made by the same advertisement panel device, and sends the content of an item corresponding to an item name to the advertisement panel device when the item name of the item list was notified by the same advertisement panel device, and

the advertisement panel device

issues a reference request of the detailed
information to the advertisement panel control terminal,
sends an item list to the information portable unit,
5 upon receipt of the item list of the detailed
information from the advertisement panel control
terminal, notifies an item name to the advertisement
panel control terminal, upon receipt of the item name
from the information portable unit, and sends the
10 content of an item sent from the advertisement panel
control terminal.

In another preferred construction, the
information portable unit sends a reference request of
the detailed information to the advertisement panel
15 device, according to a user's instruction, displays an
item list upon receipt of the item list of the detailed
information, sends an item name of an item specified by
a user to the advertisement panel device, and receives
and displays the content of the item sent from the
20 advertisement panel device.

In another preferred construction, the
advertisement panel control terminal

stores an access history indicating access state
of each item of the registered detailed information, and
25 updates the access history stored based on an
item name notified from the advertisement panel device.

In another preferred construction, the detailed

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information includes reservation information indicating reservation state,

the information portable unit sends reservation requesting information to the advertisement panel device,

5 the advertisement panel device sends the reservation requesting information to the advertisement panel control terminal, upon receipt of the reservation requesting information,

10 the advertisement panel control terminal sends the reservation requesting information sent from the advertisement panel device to the shop terminal corresponding to the advertisement panel device, and

15 the shop terminal controls the reservation information indicating the reservation state and updates the reservation information based on the received reservation requesting information.

20 According to a further aspect of the invention, a computer readable memory storing a program for controlling a shop information advertisement in a shop information advertisement panel system having a plurality of shop terminals provided in a shop, an advertisement panel control terminal for controlling an advertisement panel, connected with the respective shop terminals through a communication network, and a

25 plurality of advertisement panel devices provided for every shop terminal for displaying an advertisement of the shop:

the program of the respective shop terminals
requesting the advertisement panel control
terminal to register advertisement information including
image information expressing an advertisement image to
5 be displayed on the advertisement panel device
corresponding to its own shop terminal, through the
communication network;

the program of the advertisement panel control
terminal

10 registering and controlling the advertisement
information for every shop terminal, based on the
registration request of the advertisement information
from the shop terminal, and sending the image
information of the advertisement information to the
15 advertisement panel device corresponding to the above
shop terminal; and

the program of the respective advertisement panel
devices

20 displaying an advertisement according to the
image information sent from the advertisement panel
control terminal.

According to a still further aspect of the
invention, a computer readable memory storing a program
for controlling a shop information advertisement in a
shop information advertisement panel system having a
25 plurality of shop terminals provided in a shop, an
advertisement panel control terminal for controlling an

advertisement panel, connected with the respective shop terminals through a communication network, and a plurality of advertisement panel devices provided for every shop terminal for displaying an advertisement of the shop:

the program of the respective shop terminals requesting the advertisement panel control terminal to register advertisement information including image information expressing an advertisement image to be displayed on the advertisement panel device corresponding to its own shop terminal and detailed information on the shop where this shop terminal is provided, through the communication network;

the program of the advertisement panel control terminal

registering and controlling the advertisement information for every shop terminal, based on the registration request of the advertisement information from the shop terminal, and sending the image information to the advertisement panel device corresponding to the shop terminal, and

when the advertisement panel device makes a reference request of the detailed information, sending the detailed information corresponding to the advertisement panel device having made the reference request of the detailed information, of the registered advertisement information, to the advertisement panel

the program of the respective advertisement panel
devices

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advertisement panel control terminal through the
advertisement panel system and the detailed information
relative to the advertisement image is sent from the
advertisement panel control terminal through the
advertisement panel system, which enables the user to
get the detailed information at ease.

Also, according to this invention, access history
showing access state of each item of the detailed
information is stored in an access history storing unit,
which enables an advertiser to get useful and necessary
information for the future commercial activities.

Also, according to this structure, when a user
sends a reservation requesting information to an
advertisement panel system showing an advertisement
image of a shop the user wants to reserve, using an
information portable unit, the reservation requesting
information is sent to a shop terminal corresponding to
the advertisement panel system through the advertisement
panel system, an advertisement panel control terminal,
and a communication network, which enables a user to
make a reservation at ease.

Other objects, features and advantages of the
present invention will become clear from the detailed
description given herebelow.

BRIEF DESCRIPTION OF THE DRAWINGS

The present invention will be understood more

fully from the detailed description given herebelow and from the accompanying drawings of the preferred embodiment of the invention, which, however, should not be taken to be limitative to the invention, but are for explanation and understanding only.

In the drawings:

Fig. 1 is a block diagram showing a first embodiment of the present invention;

Fig. 2 is a flow chart showing a processing example of each advertisement information registration requesting unit 11-1 to 11-n;

Fig. 3 is a view showing an example of a file name input screen.

Fig. 4 is a flow chart showing a processing example of an advertisement information registration unit 211;

Fig. 5 is a view showing the content example of an advertisement information storing unit 22.

Fig. 6 is a flow chart showing a processing example of each advertisement information update requesting unit 12-1 to 12-n;

Fig. 7 is a flow chart showing a processing example of an advertisement information updating unit 212;

Fig. 8 is a flow chart showing a processing example of a detailed information requesting unit 43;

Fig. 9 is a view showing the information to be

exchanged at a reference time to the detailed information;

Fig. 10 is a flow chart showing a processing example of a detailed information referring unit 213;

5 Fig. 11 is a flow chart showing another processing example of the detailed information referring unit 213;

Fig. 12 is a block diagram showing a second processing example of the present invention;

10 Fig. 13 is a flow chart showing a processing example of a reservation requesting unit 45;

Fig. 14 is a view showing an example of a reservation screen;

15 Fig. 15 is a view showing the information to be exchanged at a reservation;

Fig. 16 is a flow chart showing a processing example of each reservation controlling unit 15-1 to 15-n.

20 DESCRIPTION OF THE PREFERRED EMBODIMENT

The preferred embodiment of the present invention will be discussed hereinafter in detail with reference to the accompanying drawings. In the following description, numerous specific details are set forth in order to provide a thorough understanding of the present invention. It will be obvious, however, to those skilled in the art that the present invention may be practiced

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without these specific details. In other instance, well-known structures are not shown in detail in order to unnecessary obscure the present invention.

Fig. 1 is a block diagram showing a first embodiment of the present invention, which comprises a plurality of shop terminals 1-1 to 1-n, an advertisement panel control terminal 2, a plurality of advertisement panel systems 3-1 to 3-n for the respective shop terminals 1-1 to 1-n, an information portable unit 4, a communication network 5 such as Internet for mutually connecting the shop terminals 1-1 to 1-n with the advertisement panel control terminal 2.

The shop terminal 1-1 can be realized by a personal computer or the like set at a shop, which includes an advertisement information registration requesting unit 11-1, an advertisement information update requesting unit 12-1, an input/output unit 13-1 such as a key board and a CRT, and a storing medium 14-1. The other shop terminals have the identical structure.

The advertisement information registration requesting unit 11-1 has a function of requesting the advertisement panel control terminal 2 to register advertisement information through the communication network 5. The advertisement information includes image information expressing an advertisement image to be shown on the advertisement panel system 3-1 and detailed information to be shown on the information portable unit

4 carried by a user in reply to the request of the user.
The image information includes, for example,
exterior/interior image of a shop and images of handling
goods. The detailed information includes various
5 information on a plurality of items for introducing a
shop in detail, such as map information showing the site
of the shop, reservation information showing the state
of reservation, and sale information showing the goods
in the sale.

10 The advertisement information update requesting
unit 12-1 has a function of requesting the advertisement
panel control terminal 2 to update the advertisement
information through the communication network 5.

15 The storing medium 14-1 is realized by a disk, a
semiconductor memory, or the other storing medium, where
a program for working a computer as the shop terminal 1-
1 is stored. This program is read out by a computer, so
to control the operation of the computer, thereby
realizing the advertisement information registration
20 requesting unit 11-1 and the advertisement information
update requesting unit 12-1.

25 The advertisement panel control terminal 2 is
realized by a computer or the like, which includes an
advertisement information controlling unit 21, an
advertisement information storing unit 22, an access
history storing unit 23, and a storing medium 24.

 The advertisement information controlling unit 21

includes an advertisement information registering unit 211, an advertisement information updating unit 212, a detail information referring unit 213, a plurality of display controlling unit 214-1 to 214-n for the respective advertisement panel systems 3-1 to 3-n.

The advertisement information which the respective shop terminals 1-1 to 1-n request to register is stored in the advertisement information storing unit 22.

The access history showing the access state of each item of the detailed information registered in the advertisement information storing unit 22 is stored in the access history storing unit 23.

The advertisement information registering unit 211 has a function of registering the advertisement information into the advertisement information storing unit 22 according to a registration request from the respective shop terminal 1-1 to 1-n.

The advertisement information updating unit 212 has a function of updating the advertisement information registered in the advertisement information storing unit 22, according to an update request from the respective shop terminals 1-1 to 1-n.

The detailed information referring unit 213 has a function of sending an item list of the detailed information of the shop terminal 1-i registered in the advertisement information storing unit 22 to the

advertisement panel system 3-i ($1 \leq i \leq n$), in reply to a
reference request to the detailed information from the
information portable unit 4, through the advertisement
panel system 3-i, a function of sending the content of
5 the item name, of the respective items of the detailed
information of the shop terminal 1-i, in reply to an
item name sent from the information portable unit 4
through the advertisement panel system 3-i, and a
function of updating the access history stored in the
10 access history storing unit 23, according to the item
name notified from the advertisement panel system 3-i.

The respective display controlling unit 214-1 to
214-n have a function of sending the image information
of the shop terminals 1-1 to 1-n registered in the
15 advertisement information storing unit 22 to the
respective advertisement panel systems 3-1 to 3-n.

The storing medium 24 is realized by a disk, a
semiconductor memory, or the other storing medium, where
a program for working a computer as the advertisement
20 panel control terminal 2 is stored. This program is read
out by the computer, so to control the operation of the
computer, thereby realizing the advertisement
information registering unit 211, the advertisement
information updating unit 212, the detail information
25 referring unit 213, and the display controlling unit
214-1 to 214-n.

The advertisement panel system 3-1 is to be set

near a shop or at busy streets in front of a station,
which includes a sending/receiving unit for portable
unit 31-1 and an advertisement displaying unit 32-1. The
other advertisement panel systems have the identical
structure.

The sending/receiving unit for portable unit 31-1
has a function of sending the information sent from the
information portable unit 4 by wireless communication
(electric waves and infrared rays) and sending the
information sent from the advertisement panel control
terminal 2 by wireless communication to the information
portable unit 4.

The advertisement displaying unit 32-1 is
realized by a CRT, LCD, or the like, which has a
function of displaying an image according to the image
information sent from the display controlling unit 214-1.

The information portable unit 4 includes a
display unit 41 such as a LCD, an operation unit 42
formed by a touch panel and a key, a detailed
information requesting unit 43, and a sending/receiving
unit 44.

The sending/receiving unit 44 has a function of
exchanging data with the advertisement panel system 3-1
by wireless communication.

The detailed information requesting unit 43 has a
function of sending a detailed information reference
request and an item name to the advertisement panel

system through the sending/receiving unit 44, according to a user's instruction and a function of displaying the item list and the detailed information the sending/receiving unit 44 receives, on the display unit 41. The detailed information requesting unit 43 is realized by, for example, a micro processor and a storing medium such as a disk or a semiconductor memory storing a program for working the micro processor as the detailed information requesting unit 43. The program stored in the storing medium is read out by the micro processor, so to control the operation of the micro processor, thereby realizing the detailed information requesting unit 43 on the micro processor.

This time, the operation of the embodiment will be described.

The operation at a time of advertisement information registration will be described by taking an example of the case of registering the advertisement information from the shop terminal 1-1. An advertiser owning the shop terminal 1-1 activates the advertisement information registration requesting unit 11-1 by using the input/output unit 13-1, when registering the advertisement information.

The advertisement information registration requesting unit 11-1 displays an input screen of a file name on the input/output unit 13-1 (Step A1), as shown in the flow chart of Fig. 2. The file name input screen

contains, for example, an input section 131 and a send button 132, as shown in Fig. 3. The input section 131 consists of several items such as showing image information (advertisement image) and showing each item of detailed information (map, special menu, etc.).

When the file name input screen as shown in Fig. 3 is displayed, an advertiser enters a file name of a file keeping image information and item information (a file existing within his or her own shop terminal 1-1) into an input column of a file name. For example, when the image information expressing an advertisement image is stored in a file named FA1, the "FA1" is input into the input column of the file name corresponding to the item name "advertisement image", when a map showing the site of a shop is stored in a file named FA2, the "FA2" is input into the input column of the file name corresponding to the item "map". When input of the file names is completed, the advertiser clicks the send button 132. It is not necessary to input a file name as for all the items established in the input section 131.

When the send button 132 is clicked, the advertisement information registration requesting unit 11-1 accepts all the file names established in the input section 131, and gets the information stored in the file having the same file name (Step A2). Then, it sends a registration request including the information obtained in Step A2 and the shop name where the shop terminal 1-1

is set (for example, "restaurant A"), to the advertisement panel control terminal 2 through the communication network 5 (Step A3). The corresponding item names are added to the respective information included in the registration request.

The advertisement information registering unit 211 within the advertisement panel control terminal 2 creates control information (Step B1 in Fig. 4), upon receipt of the registration request from the shop terminal 1-1. The control information includes the advertisement panel number "001" of the advertisement panel system 3-1 which is assigned to the shop terminal 1-1, the shop name "restaurant A" where the shop terminal 1-1 is set, the item names "advertisement image, map, special menu, reservation state, ...", included in the registration request, and the file names "IMG-001, MAP-001, SP-001, RSV-001, ..." of the files storing the information corresponding to the above item names. Of the file names, a predetermined symbol for every item is defined in the portion before "-", and the advertisement panel number "001" of the advertisement panel system 3-1 which is assigned to the shop terminal 1-1 is set in the portion after "-".

Then, the advertisement information registering unit 211 registers the advertisement information including the control information created in Step B1, the file "IMG-001" storing the image information, and

the files "MAP-001", "SP-001", "RSV-001", ... storing the respective items of the detailed information, into the advertisement information storing unit 22, as shown in Fig. 5 (Step B2).

5 When the advertisement information of the shop terminal 1-1 is registered into the advertisement information storing unit 22, the display controlling unit 214-1 corresponding to the shop terminal 1-1 supplies the image information stored in the file "IMG-001" to the advertisement panel system 3-1 corresponding to the shop terminal 1-1 (Step B3). Thus, the advertisement displaying unit 32-1 within the advertisement panel system 3-1 displays an image according to the above image information.

10 This time, the operation at a time of advertisement information update will be described by taking an example of the case of updating the advertisement information on the side of the shop terminal 1-1. An advertiser owning the shop terminal 1-1 activates the advertisement information update requesting unit 12-1 by using the input/output unit 13-1 when updating the advertisement information.

15 Thus, the advertisement information update requesting unit 12-1 displays the file name input screen on the input/output unit 13-1 (Step C1 in Fig. 6). This file name input screen has the structure as shown in Fig. 3.

When the file name input screen is displayed, an advertiser enters a file name of a file keeping the updated content, into an input column of the file name corresponding to the item to update the content. For example, when updating the content of the item "special menu" of the detailed information, he or she enters the file name of the file (for example, FA10) storing the updated special menu into the input column of the file name corresponding to the item name "special menu". When the input of the file name is completed, he or she clicks the send button 132.

Thus, the advertisement information update requesting unit 12-1 accepts all the file names set on the file name input screen and gets the information stored in the file having the corresponding file name (Step C2). In the case of this example, since the file name FA10 corresponding to the special menu is set on the file name input screen, the advertisement information updating unit 12-1 obtains the content of the file FA10.

Thereafter, the advertisement information update requesting unit 12-1 sends the update request including the content of the file FA10 obtained in Step C2 and the shop name "restaurant A" where the shop terminal 1-1 is set, to the advertisement panel control terminal 2 through the communication network 5 (Step C3). The corresponding item name "special menu" is added to the

information included in the update request.

The advertisement information updating unit 212 within the advertisement panel control terminal 2 extracts the shop name "restaurant A" included in the update request, upon receipt of the update request from the shop terminal 1-1 (Step D1 in Fig. 7). Then, the advertisement information updating unit 212 retrieves the control information on the shop name "restaurant A" from the advertisement information storing unit 22, and extracts the file name corresponding to the item "special menu" from the retrieved control information (Step D2). Assuming that the control information is as shown in Fig. 5, for example, the file name "SP-001" will be extracted. The advertisement information updating unit 212 replaces the content of the file name "SP-001" with the information included in the update request (information relative to the special menu) (Step D3).

When the image information within the advertisement information is updated, the display controlling unit 214-1 supplies the updated image information to the advertisement panel system 3-1 as mentioned above (Step B3 in Fig. 4). The updated image information is displayed on the advertisement displaying unit 32-1 of the advertisement panel system 3-1.

This time, the operation when a user owning the information portable unit 4 refers to the detailed

information will be described.

When a user sees an advertisement image displayed on the advertisement panel system (for example, the advertisement panel system 3-1) and wants to know the detailed information of the shop, the user directs the sending portion of electric waves and infrared rays of the information portable unit 4 to the advertisement panel 3-1 and presses the reference request button (not illustrated) provided on the operation unit 42.

The detailed information requesting unit 43 within the information portable unit 4 supplies the detailed information reference request through the sending/receiving unit 44 (Step E1 in Fig. 8). Upon receipt of the detailed information reference request sent from the information portable unit 4, the sending/receiving unit for portable unit 31-1 within the advertisement panel system 3-1 adds the advertisement panel number "001" of itself to the same request, hence to pass it to the advertisement panel control terminal 2.

Upon receipt of the detailed information reference request with the advertisement panel number "001" added there, the detailed information referring unit 213 within the advertisement panel control terminal 2 extracts the added advertisement panel number "001" (Step F1 in Fig. 10). Then, the detailed information referring unit 213 retrieves the control information on the advertisement panel number "001" from the

advertisement information storing unit 22 (Step F2).
When it found the control information on the
advertisement panel number "001", it creates an item
list based on the content and returns it to the
5 advertisement panel system 3-1 (Step F3). For example,
assuming that the control information as shown in Fig. 5
has been found in Step F2, it will return the item list
including the item names "map, special menu, reservation
state, ..." to the advertisement panel system 3-1, in Step
10 F3. This item list is sent to the information portable
unit 4 through the sending/receiving unit for portable
unit 31-1 within the advertisement panel system 3-1 as
shown in Fig. 9.

When the sending/receiving unit 44 receives the
15 item list, the detailed information requesting unit 43
within the information portable unit 4 displays it on
the display unit 41 (Step E2 in Fig. 8).

When the item list is displayed on the display
unit 41, a user selects an item name of an item he or
20 she wants to refer to therefrom. For example, assuming
that the item name "map" is selected (YES in Step E5),
the detailed information requesting unit 43 sends the
selected item name "map" to the advertisement panel
system through the sending/receiving unit 44, hence into
25 a wait state of receiving the detailed information (Step
E6).

Upon receipt of the item name "map" sent from the

information portable unit 4, as shown in Fig. 9, the sending/receiving unit for portable unit 31-1 within the advertisement panel system 3-1 adds the advertisement panel name "001" to the item name "map", hence to pass it to the advertisement control terminal 2.

When the item name "map" with the advertisement panel number "001" added there is sent from the advertisement panel system 3-1, the detailed information referring unit 213 within the advertisement panel control terminal 2 extracts the advertisement panel number "001" at first, as shown in the flow chart of Fig. 11, and retrieves the control information on the advertisement panel number "001" from the advertisement information storing unit 22 (Steps G1, G2). Based on the retrieved control information, it requires the file name "MAP-001" of the file storing the information on the item name "map", passes the content of the file to the advertisement panel system 3-1 as the detailed information, and registers a set of the item name "map" of the accessed detailed information, the access time, and the shop name of the shop where the accessed detailed information is registered, into the access history information storing unit 23 (Steps G3, G4).

Upon receipt of the detailed information (map), the sending/receiving unit for portable unit 31-1 within the advertisement panel system 3-1 sends it to the information portable unit 4.

When the sending/receiving unit 44 receives the detailed information (map), the detailed information requesting unit 43 within the information portable unit 4 displays it on the display unit 41 (Step E7 in Fig. 8).

5 When a user wants to refer to the other item of the detailed information, he or she instructs the detailed information requesting unit 43 to display the item list again by using the operation unit 42. Thus, the detailed information requesting unit 43 displays the item list on
10 the display unit 41 (YES in Step E4, Step E8). When finishing the reference to the detailed information, he or she operates the operation unit 42 so as to instruct the detailed information requesting unit 43 to finish the processing. Thus (YES in Step E3), the detailed
15 information requesting unit 43 will finish the processing.

A second embodiment of the present invention will be described this time.

Fig. 12 is a block diagram showing the second
20 embodiment of the present invention, which comprises a plurality of shop terminals 1-1a to 1-na, an advertisement panel control terminal 2a, a plurality of advertisement panel systems 3-1 to 3-n for the respective shop terminals 1-1a to 1-na, an information
25 portable unit 4a, a communication network 5 for mutually connecting the shop terminals 1-1a to 1-na with the advertisement panel control terminal 2a.

The shop terminal 1-1a of this embodiment is different from the shop terminal 1-1 of the first embodiment shown in Fig. 1 in that this embodiment is provided with the advertisement information update requesting unit 12-1a instead of the advertisement information update requesting unit 12-1 and a storing medium 14-1a instead of the storing medium 14-1, and further with a reservation controlling unit 15-1 additionally.

The advertisement information update requesting unit 12-1a has a function of sending an update request of reservation information to the advertisement panel control terminal 2a when receiving the instruction from the reservation controlling unit 15-1, in addition to the function of the advertisement information update requesting unit 12-1 shown in Fig. 1.

The reservation controlling unit 15-1 has a function of controlling the reservation information indicating the reservation state stored in a reservation information file (not illustrated) within the own shop terminal 1-1a, a function of updating the reservation information stored in the reservation information file based on the reservation requesting information sent through the communication network 5, and a function of instructing the advertisement information update requesting unit 12-1a to make an update request of the reservation information at updating of the reservation

information.

The storing medium 14-1a is realized by a disk, a semiconductor memory, and the other storing medium, where a program for working a computer as the shop terminal 1-1a is stored. This program is read out by the computer, so to control the operation of the computer, thereby realizing the advertisement information registration requesting unit 11-1, the advertisement information update requesting unit 12-1a, and the reservation controlling unit 15-1 on the computer.

The advertisement panel control terminal 2a is different from the advertisement panel control terminal 2 shown in Fig. 1 in that it is provided with the advertisement information controlling unit 21a having the reservation request sending/receiving unit 215 additionally, instead of the advertisement information controlling unit 21, and with the storing medium 24a instead of the storing medium 24.

The reservation request sending/receiving unit 215 has a function of sending reservation request information sent from the information portable unit 4a through the advertisement panel system 3-i ($1 \leq i \leq n$), to the shop terminal 1-ia through the communication network 5 and a function of sending a reservation complete message and an error message sent from the shop terminal 1-ia, to the information portable unit 4a through the advertisement panel system 3-i.

The storing medium 24a is realized by a disk, a semiconductor memory, or the other storing medium, where a program for working a computer as the advertisement panel control terminal 2a is stored. This program is read out by the computer, so to control the operation of the computer, thereby realizing the advertisement information registering unit 211, the advertisement information updating unit 212, the detailed information referring unit 213, the display controlling unit 214-1 to 214-n, and the reservation request sending/receiving unit 215 on the computer.

The information portable unit 4a is different from the information portable unit 4 shown in Fig. 1 in that it is provided with the detailed information requesting unit 43a including the reservation requesting unit 45, instead of the detailed information requesting unit 43. The detailed information requesting unit 43a is realized by a micro processor and a storing medium such as a disk or a semiconductor memory storing a program for working the micro processor as the detailed information requesting unit 43a. The program stored in the storing medium is read out by the micro processor, so to control the operation of the micro processor, thereby realizing the detailed information requesting unit 43a including the reservation requesting unit 45 on the micro processor.

The reservation requesting unit 45 has a function

of sending the reservation requesting information to the advertisement panel system through the sending/receiving unit 44 by wireless communication, according to a user's instruction.

5 This time, the operation of the embodiment will be described. The operation at a time of registering the advertisement information, updating the advertisement information, and referring to the detailed information is similar to that of the above mentioned first
10 embodiment, and only the operation at a time of reservation will be described here.

 For example, assume that a user carrying the information portable unit 4a shows the reservation state of the detailed information of the restaurant A where
15 the shop terminal 1-1a is set, on the display unit 41, by using the advertisement panel system 3-1. Watching the reservation state, the user confirms that there is a vacancy in a desired time zone, and then operates the operation unit 42 so to activate the reservation
20 requesting unit 45.

 The reservation requesting unit 45 displays the reservation screen as shown in Fig. 14 on the display unit 41 (Step H1 in Fig. 13). This reservation screen contains the reservation state (the content is the same
25 as at a reference), an input column of the reservation indispensable items, a message display column, an end button, a send button, and re-display button.

When the reservation screen is displayed, the user operates the operation unit 42 so as to enter the name, the number of people, and the phone number into the input column of the reservation indispensable items corresponding to the desired time zone. In the example of Fig. 14, the name "Yamada", the number of people "four", and the phone number "00-1111-2222" are filled in the input column of the reservation indispensable items corresponding to the time zone 19:00 to 21:00 on March 31. When finishing the input of the reservation indispensable items, the user presses the send button.

Thus, the reservation requesting unit 45 sends the reservation requesting information including the reservation time zone "19:00 to 21:00 on March 31", the name "Yamada", the number of people "four", and the phone number "00-1111-2222" to the advertisement panel system through the sending/receiving unit 44 (YES in Steps H4, H5).

This reservation requesting information is sent to the advertisement panel system 3-1 as shown in Fig. 15. Upon receipt of the reservation requesting information, the sending/receiving unit for portable unit 31-1 within the advertisement panel system 3-1 adds the advertisement panel number "001" attached on the own advertisement panel system 3-1, to the same information, and sends it to the advertisement panel control terminal 2a.

The reservation request sending/receiving unit 215 within the advertisement panel control terminal 2a sends the reservation requesting information sent from the advertisement panel system 3-1, to the shop terminal 1-1a corresponding to the advertisement panel number "001" through the communication network 5, as shown in Fig. 15.

Upon receipt of the reservation requesting information, the reservation controlling unit 15-1 within the shop terminal 1-1a checks the consistency of the same information (whether the number of the reserved people is within the number of the vacancies or not) (Step J1 in Fig. 16).

When it is consistent (YES in Step J2), the reservation information stored in the reservation information file is updated according to the received reservation requesting information (Step J3). Thereafter, the reservation controlling unit 15-1 sends the reservation complete message to the advertisement panel control terminal 2a through the communication network 5, and further instructs the advertisement information update requesting unit 12-1a to send the update request (Steps J4, J5). Thus, the advertisement information update requesting unit 12-1a sends the update request including the content of the above reservation information file to the advertisement panel control terminal 2a through the communication network 5.

When it is not consistent (NO in J2), the reservation controlling unit 15-1 sends an error message to the advertisement panel control terminal 2a through the communication network 5 (Step J6).

5 When receiving the reservation complete message or the error message from the shop terminal 1-1a, the reservation request sending/receiving unit 215 within the advertisement panel control terminal 2a passes it to the advertisement panel system 3-1, and the
10 advertisement information updating unit 212 updates the reservation information about the shop terminal 1-1a registered in the advertisement information storing unit 22, upon receipt of the update request of the reservation information from the shop terminal 1-1a.

15 Upon receipt of the reservation complete message or the error message from the advertisement panel control terminal 2a, the sending/receiving unit for portable unit 31-1 within the advertisement panel system 3-1 sends it to the information portable unit 4a.

20 When the sending/receiving unit 44 receives the reservation complete message or the error message, the reservation requesting unit 45 within the information portable unit 4a displays it in the message display column on the reservation screen (Step H6 in Fig. 13).

25 When the reservation complete message is displayed on the message display column, a user presses the end button, so to finish the processing (Step H2).

When the error message is displayed, a user presses the re-display button. Thus, the reservation requesting unit 45 displays the reservation screen on the display unit 41 again (YES in Steps H3, H7). When the reservation screen is displayed again, he or she uses it so as to make a reservation again.

First, the present invention can update an advertisement image immediately and lessen the burden of an advertiser. This is because the advertisement information is to be registered and updated through the communication network, and therefore an advertiser does not need to go to a setting place of the advertisement panel system.

Second, it can display the content of an update advertisement without imposing much load on a communication network. This is because the advertisement information is stored in the advertisement control terminal and the communication network is used only at a time of updating the content.

Third, it can present not only an advertisement image but also the detailed information such as a map for introducing a shop in detail, reservation state, and the like to a user. This is because the information portable unit carried by a user is provided with the detailed information requesting unit and the advertisement panel system is provided with the sending/receiving unit for portable unit, thereby

exchanging the detailed information reference request and the detailed information between the information portable unit and the advertisement panel control terminal through the advertisement panel system.

5 Fourth, it can make an effective advertisement taking the focus on the consumers comparatively in the neighborhood of a shop. This is because it can provide the attractive visual image information and the detailed information of the update content depending on a
10 necessity in their combination.

 Fifth, it enables an advertiser to get necessary information for the future commercial activities. This is because the access history to the detailed information is to be stored.

15 Sixth, it enables a user to make a reservation at ease. This is because the reservation requesting unit, the sending/receiving unit for portable unit, the reservation request sending/receiving unit, and the reservation controlling unit are respectively provided
20 with the information portable unit, the advertisement panel system, the advertisement panel control terminal, and the shop terminal, thereby making it possible to send the reservation requesting information from the information portable unit to the shop terminal through
25 the advertisement panel system, the advertisement panel control terminal, and the communication network.

 Although the invention has been illustrated and

described with respect to exemplary embodiment thereof, it should be understood by those skilled in the art that the foregoing and various other changes, omissions and additions may be made therein and thereto, without departing from the spirit and scope of the present invention. Therefore, the present invention should not be understood as limited to the specific embodiment set out above but to include all possible embodiments which can be embodied within a scope encompassed and equivalents thereof with respect to the feature set out in the appended claims.

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